

**Greater Caribbean
Search and Rescue Workshop**

**San Juan, Puerto Rico
19-22 August 1996**

FINAL REPORT

International
Civil Aviation
Organization



International
Maritime
Organization

**The International Civil Aviation Organization
(North American, Central American, and
Caribbean Offices)**

**and the
International Maritime Organization**

FINAL REPORT
GREATER CARIBBEAN SEARCH AND RESCUE WORKSHOP
SAN JUAN, PUERTO RICO, 19 -22 AUGUST 1996

1. The International Civil Aviation Organization (ICAO), as depository of the 1944 Convention on International Civil Aviation, and International Maritime Organization (IMO), as depository of the 1974 International Convention for Safety of Life at Sea (SOLAS), and the 1979 International Convention on Maritime Search and Rescue (SAR), jointly sponsored and convened the Greater Caribbean Search and Rescue Workshop in San Juan, Puerto Rico, 19 to 22 August 1996. The meeting marked the first time ICAO and IMO have jointly sponsored a regional workshop to address both aeronautical and maritime SAR.
2. Support for the workshop was a cooperative effort. The Workshop was organized with financial support by the Governments of the United Kingdom and the United States, with contributions in kind by ICAO and IMO, various States and other sponsors. Cost of participation was the responsibility of the Governments and organizations sponsoring the attendees. Support services were provided by Soza & Company, Ltd. (SOZA) of the United States.
3. Workshop planning was carried out by an international planning group consisting of representatives from Barbados, Canada, Netherlands Antilles, Trinidad and Tobago, ICAO, IMO, the U.S. Coast Guard, SEARCH, the Federal Aviation Administration (FAA), and the Bahamas Air-Sea Rescue Association (BASRA). Plans for the Workshop were based upon results of earlier surveys of SAR authorities throughout the Greater Caribbean.
4. Aeronautical and maritime authorities were invited from 34 States and nine international organizations. Representatives from 25 States participated along with other experts. The list of participants is provided as Enclosure (1).
5. The primary goal of the Workshop was for States to share information and cooperate to raise the level of SAR services within the Greater Caribbean. General Workshop objectives included:
 - a) familiarize attendees to ICAO/IMO SAR provisions and current initiatives;
 - b) develop recommendations for implementing ICAO and IMO SAR plans;
 - c) establish processes for continuation of SAR development and for implementation of regional SAR initiatives;
 - d) conduct a regional needs and capabilities assessment;
 - e) foster working relationships between individuals, agencies, and States which will continue and expand in the future; and
 - f) strive for 100% participation.

These objectives were to be met mainly through a coordinated program of presentations and workshops.

6. After the meeting was opened by the representatives of ICAO and IMO, Rear Admiral John Lockwood, U.S. Coast Guard Commander, Seventh Coast Guard District, Miami, presented a keynote speech. In it he noted the shared humanitarian goals of Caribbean States, growing regional cooperation in a number of areas of common interest, and the outstanding leadership provided by ICAO and IMO in the areas of safety and SAR. He wished the meeting every success.
7. The four plenary sessions of the Workshop were chaired by Mr. Nicholas Wardle of Search and Rescue Charitable Foundation (SEARCH), Mr. Jean Charles Cornillou of Martinique (France), Mr. Carlos Sanchez Alfaro of Costa Rica, and Commander Jan Prins of the Netherlands Antilles, respectively.
8. Enclosure (2) is a Questionnaire which each aeronautical and maritime SAR authority within the region was requested to complete in advance of the meeting. Enclosure (3) contains the information provided by some States in response to the Questionnaire.
9. Following are some highlights of the presentations and associated discussions:
 - a) Mr. Gustavo De León (ICAO NACC Air Traffic Management Officer) gave a presentation on ICAO's role in aeronautical SAR. After reviewing the history of the Convention on International Civil Aviation and its Annexes, he focused on Annex 12 (Search and Rescue). He also discussed the ICAO SAR Manual, ICAO's SAR cooperation with IMO, the relevant Air Navigation Plan, and other special ICAO SAR projects and initiatives.
 - b) Captain John Thompson (IMO Navigation Section) gave a presentation on IMO's work in maritime SAR. He reviewed SAR provisions of the Brussels Convention dealing with salvage, the Safety of Life at Sea (SOLAS) Convention, and the Law of the Sea Convention. Then he provided an overview of the International Convention on Maritime Search and Rescue and the IMO SAR manuals, establishing their similarity to ICAO documents. He brought attention to special efforts of IMO such as technical assistance and steps being taken to reduce false alerts.
 - c) Captain Guillermo Aguilar Acosta (COSESNA) described the Central American Regional SAR system, resulting from an ICAO special implementation project (SIP) which built on earlier work by the States concerned. The SIP resulted in a regional SAR plan, regional SAR manual, and regional Rescue Coordination Center (RCC) in Honduras with Rescue Sub-centers (RSC) in each State

involved. COCESNA, which handles air traffic within the same region, hosts the RCC and sponsors a regional SAR coordinating committee.

- d) Mr. Herald Wilson (Director of Civil Aviation, Organization of Eastern Caribbean States) described a SAR system being implemented within the Eastern Caribbean, where he believes attitudes about the importance of SAR are improving. He reviewed the key features of a SAR plan currently under review, and which he hopes will soon be approved by the States concerned. RCCs in Piarco and San Juan, together with RSCs in several States, support the plan. Agreements are being considered which would waive immigration and customs entry requirements for SAR. With the available facilities and some additional training, SAR obligations under the Chicago Convention seem attainable.
- e) Mr. Nicholas Wardle (SEARCH) provided an overview of the volunteer SAR organizations in the Caribbean region. SEARCH supports these voluntary SAR organizations. Examples of where such organizations exist or are developing include the Bahamas, Turks and Caicos, British Virgin Islands, Martinique and St. Maarten, Curacao and Bonaire, St. Eustatius, and Aruba. Fishing vessels and pleasure craft are abundant in these areas, and increase the number of SAR cases throughout the region. Shared and individually owned craft and radio installations are available. The volunteer SAR organizations are mostly supported by public contributions which SEARCH helps to solicit.
- f) A panel discussion on use of satellites for SAR was conducted with the support of RADM Ed Gilbert of American Mobile Satellite Corporation, Mr. Robert Kelley of ORBCOMM, Mr. Al Labbe of COMSAT, and Mr. Dave Edwards representing Cospas-Sarsat. After these communications experts provided an overview of available and planned satellite services, questions from participants on equipment registration, costs, and functionality were addressed. These experts also provided supplemental information at other times throughout the Workshop.
- g) RADM Gilbert, drawing on his experience in handling emergencies throughout his previous career with the U.S. Coast Guard, provided insights into crisis management, focusing on principles which are widely applicable to any type of crisis situation, and using lessons from history for illustration.
- h) Mr. Tom Braithwaite of ARINC provided a presentation relating aeronautical communications capabilities to regional SAR needs as they had been identified in the Workshop so far. He addressed connectivity between RCCs/RSCs and the ability of these centers to communicate with their available SAR units. Telephone, networks, and radio capabilities were reviewed. Functions such as message relays, weather information, data transfers, logistics support, and avionics were also covered. He ended with an observation that a study to develop a master communications plan for the Caribbean needs to be carried out as a basis for developing a cost-effective system.

- i) Dr. Dan Hanfling (George Washington Hospital of Washington, DC) presented a concept of all-risk crisis management called the Incident Command System (ICS). After discussing ICS, he then showed how it can be applied during multi-agency multi-jurisdictional response to incidents of any size, and for illustration showed how it could be applied to the scenario of an aircraft crash at an airport involving mass injuries. Examples of some areas which could be managed simultaneously with ICS include fire and police actions, water rescue, communications, initial medical response and evacuation, and triage. ICS accounts for command structure, operations and logistics, and was highly recommended for consideration for use by emergency responders.
 - a) Mr. Harvey Kammerer (Soza and Company, Ltd.) introduced the Emergency Response Management Center (ERMC). This is a joint-venture product involving integration of several communications and computer applications to meet customer needs on a tailored basis, offering a powerful tool for emergency event monitoring and management. It integrates information sources and tracks resources to support decision making. In this way it can give emergency managers an edge in applying all available resources optimally. The ERMC workstation can initiate communications via a number of channels, including multiple available satellite systems.
 - b) Mr. Myles Ross (Canadian SAR College) provided an overview of maritime communications, beginning with an overview of the SAR functions which maritime communications support. The range of existing means of communications from visual signals to satellites was presented, followed by a brief description of the Global Maritime Distress and Safety System (GMDSS). GMDSS equipment carriage requirements for ships based on where they sail were introduced, and the SAR value of GMDSS was recognized to exist after an alert is received, regardless of whether the alert was sent via a GMDSS system. He stressed the importance of equipment registration. Some delegates expressed the view that a centralized registration database maintained by IMO or some other international organization would provide a great service to RCCs worldwide, but particularly within the Caribbean.
 - c) Mr. Jeremy Collymore (Caribbean Disaster Emergency Response Agency, CDERA) discussed the mission and structure of his Organization, which is mainly to respond operationally to requests for assistance from participating States during an emergency. CDERA also distributes information on disasters, helps to mitigate or eliminate consequences of emergencies, and maintains response capabilities. It has MOUs for cooperation and coordination with other regional agencies.
10. Each participant was assigned to one of four teams which attended a total of 28 separate one-hour workshops during the week. These workshops were intended to

use team assignments as a tool for addressing a broad range of management, support, and operational matters essential to an effective SAR system. Due to the cultural and professional diversity which exists throughout the Caribbean aeronautical and maritime SAR communities, and to the infrequent opportunities of the participants to work together, the workshops were designed to be the most important focus of the entire meeting, to maximize participation and leadership opportunities, and to produce useful results which the participants could take home and apply. Most importantly, the workshop teams developed specific strategies on a sub-regional basis for ensuring that SAR coordination will become more of a reality in the Caribbean, and that aeronautical and maritime authorities will actually begin working together in the area of SAR. Some of the topics covered in the workshops are listed below:

Responses to diverse SAR scenarios	Sample plans of operation
Use of all available resources	RCC functions and needs
Affordable technologies	Root causes of success and failure
Plans and agreements	SAR coordinating committees
Training	Unifying national assets
Communications	Ongoing regional SAR improvements

11. Based upon the progress at the Workshop, the plenary session adopted certain general recommendations, which are provided as Enclosure (4). In addition, the meeting decided to provide to the attendees separately from this report other specific recommendations developed by teams in during the various workshops.
12. On the final day, U.S. Coast Guard Commander, Section Greater Antilles, hosted an informative and interesting tour of Rescue Sub-center San Juan, and demonstrations of facilities, equipment and procedures used for SAR.
13. In accordance with the request of the Workshop, the United States agreed to submit this report for consideration by the appropriate bodies of ICAO and IMO.
14. At the closure of the Workshop, the representatives of ICAO, IMO and the United States expressed sincere appreciation to all who had provided support to make the Workshop a success. In particular, they referred to:
 - a) Governments and international organizations who had sent their respective representatives;
 - b) Those who had provided funding and other support to make the Workshop possible;
 - c) The presenters, chairpersons, team leaders and team rapporteurs for supporting and facilitating the work;

- d) U.S. Coast Guard Commander, Section Greater Antilles, for hosting the helpful SAR Facility visit;
- e) SOZA for its outstanding meeting support, and the staff of U.S. Coast Guard Headquarters for oversight of the extensive planning carried out and preparation for the Workshop; and
- f) The communications service providers (ARINC, ORBCOMM, SOZA, D.H. Wagner, AMSC, and COMSAT) for providing panel experts and other support for the Workshop.

15. The Workshop was then adjourned.

Enclosures:

- (1) List of Participants
- (2) Questionnaire
- (3) Synopsis of Questionnaire Responses
- (4) Workshop Recommendations

List of Participants

<u>Name</u>	<u>Country/Organization</u>
Gustavo De Leon	ICAO
John Thompson	IMO
Lonnie Adkins	United States
Phil Aspinall	British Virgin Islands
Rene Audic	Martinique
Louis-Robert Belot	Haiti
Lincoln Benedict	United States
Garnet Best	Trinidad & Tobago
Bart Boom	Netherlands Antilles
Jacques Boursiouot	Haiti
Francis Carty	St. Maarten
Karen Chaisson	United States
John Charles	Grenada
Sherman Ed Clarke	Turks & Caicos Islands
David Cooke	British Virgin Islands
Jean Charles Cornillou	Martinique
Andre Cox	St. Lucia
Karel Dambrink	Netherlands Antilles
Ronny Davidson	United States
Michael Donovan	British Virgin Islands
Raymond Dupont	Guyana
Johannes Felten	Aruba
Cornelius Francis	Dominica
Buck Grizzel	Cayman Islands
Hendrikus Hager	Netherlands Antilles
Bob Hall	Bahamas
Dan Hanfling	United States
Rick Hanna	Canada
Jeremy Jackson	Cayman Islands
Jennifer Lay	United States
Dan Lemon	United States
Brian Lisko	United States
Christopher Lloyd	Bahamas
Admiral Lockwood	United States
Manuel Mendez	Dominican Republic
Ron Miller	Canada
Silvio Montenegro Bustamante	Nicaragua

<u>Name</u>	<u>Country/Organization</u>
Ann Moore	United States
Simon Morson	Montserrat
Duncan Muirhead	British Virgin Islands
Courtney Myles	Cayman Islands
Beryl Nelson	Turks and Caicos
Jimmy Ng	United States
Estuardo Ochoa	Guatemala
Marc Paulemon	Haiti
Francis Pedro	Trinidad & Tobago
Leroy Penn	Turks & Caicos Islands
Vernor Piedra - Alpizar	Costa Rica
Jan Prins	Netherlands Antilles
Welsh Richards	Dominica
David Robin	St. Vincent and the Grenadines
Jose Rodriguez	United States
Myles Ross	Canada
Richard Russell	Jamaica
Pedro San Miguel Zatarain	Venezuela
Carlos Sanchez - Alfaro	Costa Rica
David Sargent	British Virgin Islands
Ricky Shurland	Barbados
Paul Steward	United States
Enrique Tamargo	United States
Roland van Gent	Netherlands Antilles
Nelson Velazquez	United States
Kenneth Waton	Bahamas
Stanley Williams	Turks & Caicos Islands
Herald Wilson	Antigua and Barbuda
A.W. Wolfs	Netherlands Antilles
Rene Zapata Jr.	United States
Jeremy Collymore	Caribbean Disaster Emergency Response Agency
John Kooijman	CITRO
Guillermo Aguilar Acosta	COCESNA
Nicholas Wardle	SEARCH
Ed Gilbert	AMSC
Fred Wilder	AMSC
Tom Braithwaite	ARINC
Wayne D'Ambrosio	COMSAT
Al Labbe	COMSAT
Robert Kelly	ORBCOMM
Dave Edwards	SOZA
Joseph Discenza	D.H. Wagner Associates

**Greater Caribbean Search and Rescue Workshop
National SAR Information Sheet
Aeronautical/Maritime (circle one)**

1. Nation:
- 1.1 National SAR Agency:
- 1.2 Rescue co-ordination centre (RCC) or rescue sub-centre (RSC) (names, locations, and addresses of their operating agencies):
- 1.3 Landline communications (telephone, fax, telex, AFTN, etc.) for centres indicated in 1.2:
- 1.4 Radio stations associated with centres indicated in 1.2:
- 1.5 Associated Inmarsat earth stations:
- 1.6 Associated Cospas-Sarsat Mission Control Centre:
- 1.7 Associated aeronautical (for aeronautical authorities) or maritime (for maritime authorities) rescue centres:
- 1.8 General types of rescue facilities (use codes below):
- 1.9 Other SAR services available for international co-operation:
- 1.10 Amplifying remarks:

RB -	rescue boat (short-range river or coastal craft)
RV -	rescue vessel (long-range sea-going craft)
HEL-L -	helicopter with ability to evacuate 3 persons and an endurance of up to 2 hours
HEL-M -	helicopter with ability to evacuate 6-15 persons and an endurance of 3-3.5 hours
HEL-H -	helicopter with ability to evacuate more than 15 persons and an endurance of more than 3.5 hours
SRG -	aircraft with a radius of action of 150 NM, plus half hour of search time remaining
MRG -	aircraft with a radius of action of 400 NM, plus 2.5 hours search time remaining
LRG -	aircraft with a radius of action of 750 NM, plus 2.5 hours search time remaining
VLR -	aircraft with a radius of action of 1,000 NM, plus 2.5 hours search time remaining

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RESPONSE TO SAR QUESTIONNAIRES

1. Nation	1.1 National SAR Agency	1.2 RCC/RSC	1.3 Landline Communications	1.4 Associated Radio Stations	1.5 Associated Inmarsat
Bahamas	Bahamas Air Sea Rescue Association	RCC BASRA HQ P.O. Box SS6247 Nassau, Bahamas	Tel 809-325-8864, Fax 809-325-2737	VHF, HF, HAM, RDF, Several volunteer stations in Out Islands - VHF 16	NA
Barbados	Barbados Coast Guard	RCC--GANTSEC, San Juan Puerto Rico RCC Trinidad & Tobago, North Post Radio MRCC, Fort de France, Martinique RSC-Barbados Coast Guard, HMBS Willoughby Fort, Pierhead Lane, Bridgetown, Barbados	RCC GANTSEC Tel-729-6770, Fax 729- 6706 RCC Trinidad Tel-637-9023, Fax 627- 0856 MRCC Martinique Tel 011-596-719292, Fax 011-596-632450 RSC Barbados Tel 429-7152, Fax 429- 7153	RCC--9YL MRCC--NA RSC-8PZ	Barbados External Telecommunication
British Virgin Islands	Virgin Islands Search and Rescue (VISAR) (Volunteer Force)	VISAR Base--situated at Road Reef Marina adjacent to Royal Virgin Islands Police Marine Branch: P.O. Box 3042, Road Town, Tortola, British Virgin Islands	Tel: 809-494-4357 Fax 809-494-6613 The office is not manned, normally opens when activated. To contact us call Virgin Islands Fire and Rescue on 809-494- 3473 or 809-494-3396 and ask them to page the duty VISAR coordinator. Leave your name and number and reasons for calling. The duty coordinator will return your call.	Marine VHF HF (Marine Base, Boat and Aircraft) - Marine VHF CH 16 (Tortola Radio V.I. Radio)	NA

RESPONSE TO SAR QUESTIONNAIRES

1.1 Nations	1.6 Associated Cospas-Sarsat MCC	1.7 Assoc. Aeronautical/Maritime Res Ctr	1.8 Types Rescue Facilities	1.9 Other Available SAR Svcs	1.10 Amplifying Remarks
Bahamas	NA	Royal Bahamas Defense Force	2 x RB, 2 x SRG	NA	NA
Barbados	NA	Barbados-Grantley Adams International Airport-Subcentre Trinidad-Piarco International-Rescue Centre	RB, RV	NA	NA
British Virgin Islands	NA	Royal Virgin Islands Police Aviation Unit	HEL-L, MRG, RV, RB	USCG	We have access to numerous auxiliary vessels of all shapes and sizes

RESPONSE TO SAR QUESTIONNAIRES

1. Nation	1.1 National SAR Agency	1.2 RCC/RSC	1.3 Landline Communications	1.4 Associated Radio Stations	1.5 Associated Inmarsat
Canada	Canadian Forces/Canadian Coast Guard	<p>Rescue Coordination Centre Victoria FMO Victoria, BC, VOS 1BO</p> <p>Rescue Coordination Centre/Canadian Mission Control, Centre Trenton, Astra, Ontario, KOK 1BO</p> <p>Rescue Coordination Centre Halifax, FMO Halifax, NS, B3K 2XO</p> <p>Marine Rescue Sub-Centre Laurentian; 101 Boulevard Champlain, Quebec, Quebec, G1K 4H9</p> <p>Marine Rescue Sub-Centre Newfoundland, P.O. Box 1300, St. John's , Newfoundland, A1C 6H8</p>	<p>RCC Victoria Tel: 604-363-2992 Fax-604-363-2944 AFTN-CyyJ YC YX</p> <p>RCC/CMCC Trenton Tel-613-965-3870 Fax 613-965-7190 AFTN CYTR ZS YX</p> <p>RCC Halifax Tel-902-427-8200 Fax-902-427-2114 Telex-021-016-4044</p> <p>MRSC Quebec Tel-418-648-3599 Fax-418-648-3614 Telex-021-0521-2208</p> <p>MRSC St. John's Tel-709-772-5151 Fax-709-772-5369 Telex 021-016-4044</p>	NA	TBA
The Cayman Islands	The Royal Cayman Islands Police	Central Police Station Emergency Control Room	Tel: 809-949-4222 or 911 Fax: 809-949-6472	Marine VHF Channel 16, 06, 55B 2182 KHZ	SARSAT
Dominica (Aeronautical)	Police Headquarters Coast Guard	Piarco Rescue Coordination Centre (RCC) Point-a-Pitra/Fort-de-France (RSC)	<p>RCC: 809-664-4852 809-664-4380 AFTN TTPPYCYX</p> <p>RSC: Tel--93-98-98 Fax 93-98-99 AFTN TFFRYCYX</p> <p>RSC: Fort-de-France Tel: 51-52-98/51-81-09 Fax 51-65-58/51-10-63</p>	NA	NA

RESPONSE TO SAR QUESTIONNAIRES

1. Nation	1.6 Associated Cospas-Sarsat MCC	1.7 Assoc Aeronautical/Maritime Res Ctr	1.8 Types Rescue Facilities	1.9 Other Available SAR Svcs	1.10 Amplifying Remarks
Canada	CMCC Trenton	NA	Victoria SRR Comox-VLR, MRG, HEL-H Victoria-HEL-H, RV Trenton SRR Trenton-VLR, HEL-H Winnipeg-VLR Yellowknife-SRG Halifax SRR Halifax-HEL-H, RV Gander-HEL-H Goose Bay-HEL-M Greenwood-VLR, HEL-H	NA	NA
The Cayman Islands	NA	Civil Aviation Authority,	RB, SRG	U.S. Coast Guard	NA
Dominica (Aeronautical)	NA	NA	RB, RV (Local)	HEL-L, HEL-M (Pointe-a-Pitre & Fort-de-France)	NA

RESPONSE TO SAR QUESTIONNAIRES

1. Nation	1.1 National SAR Agency	1.2 RCC/RSC	1.3 Landline Communications	1.4 Associated Radio Stations	1.5 Associated Inmarsat
Dominica (Maritime)	Police Department, for national security Prime Minister's office	Police Marine Unit/Coast Guard base situated at Fond Cole, Roseau, Commonwealth of Dominica	Tel: 809-448-2222, ext. 5198/5197/5173/5183 Fax 809-448-7158		
Grenada	Grenada Coast Guard	AS 1-1	Tel, Fax, Radio HF, VHF	Airport, North Comt (TNT)	NA
Jamaica	JDF Coast Guard	JDF Coast Guard, Port Royal, Kingston	Tel: 809-967-8191/3 Fax: 809-967-8278	Kingston Radio 6YI	NA
Martinique	Organisme d'etudes et de coordination pour la recherche et le sauvetage en Mer (SECMAR) 16 Boulevard Raspail, 75007 Paris T: (33)-1-42.84.19.04 F: (33)-1-42.84.07.90	1 Centre Operationnel de Sauvetage Maritime aux Antilles (COSMA) MRCC Fort de France BP 621, 97 261 Fort de France CEDEX, France (F.W.I.)	Tel: (596) 71.92.92 Fax (596)-63.24.50 Telex: 912 008 MR MRCC director (596) 63.73.90	24H radio VHF watch remote controlled by MRCC Fort de France 1 VHF antenna with Ch 16 & 11 at Morne Bigot in Martinica 1 VHF antenna with Ch 16 & 11 at Morne a Louis in Guadeloupe maintenance operated by telephone Cie FRANCE TELECOM 24H radio HF-SSB watch in MRCC Fort de France	Coast Earth Station (CES) Inmarsat "C"

RESPONSE TO SAR QUESTIONNAIRES

1. Nation	1.6 Associated Cospas-Sarsat MCC	1.7 Associated Aeronautical/Maritime Res Ctr	1.8 Types Rescue Facilities	1.9 Other Available SAR Svcs	1.10 Amplifying Remarks
Dominica (Maritime)			RB: 1 x 40' patrol boat 1 x rigid hull inflatable boat (RHIB) 2 x boston whalers RV: 1 x 65' cutter Range--500 nm cruising speed 15 knots --360 nm full throttle		Descriptive report
Grenada	NA	Airport Authority Point Salines	2 x RB, 2 x RV	San Juan, ABC Islands, Venezuela	Close working relationship with Puerto Rico, Trinidad, Venezuela, and OECS, RSS states
Jamaica	NA	Kingston Control Center/JAF Coast Guard	RV, RB, HEL-M, MRG	NA	NA
Martinique	FMCC. SARSAT TOULOUSE chief: F. Bossuat Tel: 33.61.27.46.36 Ops Room; Day-Night: 33.61.27.41.39 Fax: 33.27.48.78 Attn.: LF1a252x Direction Générale de l'Aviation Civile 90 Boulevard RASPAIL 75. 007 Paris Attn.: Col. BENALET Bureau SAR	ARCC Piarco (Trinidad & Tobago) ARSC VC Bird (Antigua & Barbuda) ARSC Le Raizet (Guadeloupe FWI) ARSC Le Lamentin (Martinique FWI) RCC San Juan (Puerto Rico US territory) ARSC Juliana (St. Marteen, Dutch)	Martinique: 25 x RB; 4 x HEL-L; 2 x SRG; 5 x RV; 2 x MRG Guadeloupe: 28 x RB; 2 x HEL-L; 2 x RV St. Barth--2 x RB St. Martin: 3 x RB	COSMA/MRCC Forot de France is SAR POC of Cospas-Sarsat Organization	COSMA is declared MRSC for FWI islands when operating SAR cases in the vicinity of these islands. When operating SAR cases elsewhere in the SRR of French Antilles COSMA fully operates as MRCC Fort de France-

RESPONSE TO SAR QUESTIONNAIRES

1. Nation	1.1 National SAR Agency	1.2 RCC/RSC	1.3 Landline Communications	1.4 Associated Radio Stations	1.5 Associated Inmarsat
Montserrat, BWI	Police Marine Unit	NA	Tel: 491-2555 Fax: 491-8013	NA	NA
Netherlands Antilles and Aruba	Coast Guard Netherlands Antilles and Aruba Naval Base Parera, Nightingaleweg z/n, Curacao, Netherlands Antilles Tel: 5999-637700	Maritime and Aeronautical RCC Curacao RNLAf 336 SQN Airport Hato Curacao, Netherlands Antilles	Tel: OPS (5999) 637900/637901 RCC: (5999) 637911/681628 Fax RCC (5999) 637950	Curacao Radio C/s: PJC	TBD
St. Lucia	Marine Police Unit Vigie Coue, Castries, St. Lucia	Marine Police Unit Vigie Coue, Castries, St. Lucia	Tel: 809-452-2595/30770 Fax: 809-453-2799	Vigie Lt. House Moule a' Chihe Lt. House	NA
St. Vincent and the Grenadines (Aeronautical)	a. Marine - St, Vincent and the Grenadines Coastguard b. Land - Royal St. Vincent and the Grenadines Police Force (RSVGPF) c. In Airport - Director of Airport Services	Coastguard Base P.O. Box 835 Kingstown, St. Vincent	Coast Guard Tel: 809-457-4568/4578/4554 Fax: 809-457-4586 Police: 809-457-1211 Fax: 809-456-2816 Airport: 809-458-4011/4960 Fax: 809-458-4768	a. CG Base Call sign - J8B Freqs - Marine VHF CH 16; HF 7.80 Mhz b. RSVGPF Call sign - J8P Freqs - HF 7.850 Mhz; CB CH 16 (27.155 Mhz) c. Airport (E.T. Joshua) Call sign - E.T. Joshua Freqs - Air VHF 121.5 Mhz, 120.9 Mhz, 121.9 Mhz	NA

RESPONSE TO SAR QUESTIONNAIRES

1. Nation	1.6 Associated Cospas-Sarsat MCC	1.7 Assoc Aeronautical/Maritime Res Ctr	1.8 Types Rescue Facilities	1.9 Other Available SAR Svcs	1.10 Amplifying Remarks
Montserrat, BWI	NA	NA	RB, RV	NA	Maintain listening watch on VHF Channel 16 and HF 7850.0 KHS
Netherlands Antilles and Aruba	TBD	NA	Curacao/Aruba/Bonaire: 4 x RB 3 Rvs, 2 x MRGs St. Maarten: 2 x RB, RV	Citizens Rescue Organization (CITRO) Curacao (3 x RB) Citizens Rescue Organization (CITRO) Bonaire (RB) SAR Foundation St. Maarten (2 x RB) Sea Rescue Foundation Aruba (volunteer yachts)	During the years 1997 and 1998 the Maritime/Aeronautical RCC and the associated Radio Station (RJC) will join together in the new Coast Guard Centre on the Naval Base Parera Curacao. Maritime Rescue Sub Centres will be established on Aruba and St. Maarten. The Coast Guard is building 3 CG cutters, in operation from mid 1998. Netherlands Naval Forces in the Caribbean will cooperate in Coast Guard duties. The RCC Curacao operates in a close cooperation with the RCC San Juan.
St. Lucia	MRCC Fort de France, Martinique	MRCC Fort de France, Martinique	1 RB (65ft), 1 RB (40ft), 3 RB (25ft), 1 RB (22ft)	NA	
St. Vincent and the Grenadines (Aeronautical)	NA	St. Vincent and the Grenadines Coastguard	Maritime: 1RV (120ft), 1RV (75ft), 1RB (40ft), 2RB (25ft)	NA	Support for SAR coordination available through Air Traffic Control, Trinidad, Tel: 809-669-4852; Fax: 809-669-4259 and the Tobago Coast Guard Tel: 809-669-3877; 809-634-4439/4208/4235 Fax: 809-637-2678

RESPONSE TO SAR QUESTIONNAIRES

1. Nation	1.1 National SAR Agency	1.2 RCC/RSC	1.3 Landline Communications	1.4 Associated Radio Stations	1.5 Associated Inmarsat
St. Vincent and the Grenadines (Maritime)	a.-Marine-St. Vincent and the Grenadines Coastguard b.-Land-Royal St. Vincent and the Grenadines Police Force Police Force (RSVGPF) c.-In Airport-Director of Airport Services	Coastguard Base, PO Box 835, Kingstown, St. Vincent	Coast Guard T-809-457-4568/4578/4554 Fax 809-457-4586 Police 809-457-1211 Fax 809-456-2816 Airport 809-458-4011/4960 Fax 809-458-4768	a. CG Base Call sign-J8B Freqs-Marine VHF Ch 16; HF 7.850 Mhz b. RSVGPF Call sign J8P Freqs HF 7.850 Mhz; CB Ch 16 (27.155 Mhz) c.-Airport (E.T. Joshua) Call Sign-E.T. Joshua Freqs-Air VHF 121.5 Mhz, 120.9 Mhz, 121.9 Mhz	NA
Trinidad and Tobago	Vested in Separate Ministries Administratively - Min. of Works and Transport Operationally - Min. of National Security	Trinidad and Tobago Coast Guard Staubles Bay Chaguaramas	Tel 809-634-4208/4235/4439/4440 809-625-4939 Fax 809-634-4944	North Carolina Radio Station	NA
Turks and Caicos (Marine & Aeronautical)	Police Department Marine Branch/TACRA	Grand Turk South Caicos Provo	Telephone, fax, telex	49-9FM 88-77 FM 95- 2 FM	Cable and wireless

RESPONSE TO SAR QUESTIONNAIRES

1. Nation	1.6 Associated Cospas-Sarsat MCC	1.7 Assoc Aeronautical/Maritime Res Ctr	1.8 Types Rescue Facilities	1.9 Other Available SAR Svcs	1.10 Amplifying Remarks
St. Vincent and the Grenadines (Maritime)	NA	St. Vincent and the Grenadines Coastguard	Maritime: IRV (75ft), IRB (40 ft), 2 x RB (25 ft)	NA	Support for SAR coordination available through Air Traffic Control, Trinidad, Tel: 809-669-4852; Fax: 809-669-4259 and the Tobago Coast Guard Tel: 809-669-3877, 809-634-4439/4208/4235 Fax: 809-637-2678

Trinidad and Tobago	NA	a. Hart's Cut Base-Gitagualanas-634-4414 b. CEDRO S Base-CEDROS-669-1393 c. Galeota Base-Galeota-630-9031 d. Tobago Base-Scarborough-639-1411/1461 e. Piarco Air Station-Piarco-66-3877	5 x RB 2 x RV 2 x HEL-L 3 x HEL-M 1 x LRG 1 x VLR	-National Emergency Management Agency (NEMA) -Port Authority of Trinidad and Tobago (PATT) -Trinidad and Tobago Light Aeroplane Club -The Meteorological Services	Coast Radio Station, North Post Radio Agency-Telecommunication Services of Trinidad and Tobago , TSTT Call sign-9JL Hours of Watch-continuous Frequencies: 2182 Khz, 2735 Khz, 156.800 Mhz Ch 16, Ch 26 Tel: 809-637-4474 809-637-9023 809-637-1566 Mission: Communication, relaying National Helicopter Services, Ltd. Commercial Company Hours of watch:0800-1600 M-F Tel 809-679-2628, 2629, 2630
Turks and Caicos	Airports control towers	Marine Branch	RB, RV, SRC, MRG, LRG, VLR	Dive Operators, private aircraft	NA

RESPONSE TO SAR QUESTIONNAIRES

1. Nation	1.1 National SAR Agency	1.2 RCC/RSC	1.3 Landline Communications	1.4 Associated Radio Stations	1.5 Associated Inmarsat
United States	United States Coast Guard Commandant (G-OPR) 2100 Second Street, SW Washington, DC 20593 (202) 267-1586	RSC San Juan, Puerto Rico RCC Miami, Florida RCC New Orleans,	Tel: 787-729-6818 Fax: 787-729-6706 Tel: 305-536-5611 Fax: 305-536-5643 Tel: 504-589-6225 Fax: 504-589-2148	San Juan (MNR) Loiza (WCT) Ponce (KRV) Miami (NMA, WOR) New Orleans (WAK) Slidell (WMU) Mobile (WLO)	Southbury, Connecticut Tel: 203-264-9090 Fax: 203-262-6088

		Louisiana		Tampa (WFA) Tampa (WPD)	
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RESPONSE TO SAR QUESTIONNAIRES

1. Nation	1.6 Associated Cospas-Sarsat MCC	1.7 Assoc Aeronautical/Maritime Res Ctr	1.8 Types Rescue Facilities	1.9 Other Available SAR Svcs	1.10 Amplifying Remarks
United States	United States Mission Control Center (NOAA) E/SP3 Federal Bldg, Room 0168 Washington, DC 20233 Tel: 301-457-5428 Fax: 301-457-5406	USCG RCC Alameda (Pacific) Tel: 510-437-3700 Fax: 510-437-3017 USCG RCC Norfolk (Atlantic) Tel: 804-398-6231 Fax: 804-398-6392	VLR, HEL-M, RV, RB VLR, LRG, HEL-H, HEL-L, RV, RB VLR, LRG, HEL-H, HEL-L, RV, RB	AMVER, Civil Air Patrol, USCG Auxiliary U.S. Southern Command RCC Howard Air Force Base Republic of Panama 612 TAG/CR, Unit 0612 APO AA 34001-0612 USA Tel: 507-284-3545/4994 Fax: 507-284-4294	Secondary USCG rescue units usually available.

1996 Greater Caribbean SAR Workshop RECOMMENDATIONS

The Workshop adopted the following recommendations which generally pertain to States within the Greater Caribbean region, and to ICAO and IMO:

1. Being aware of the close cooperation between the International Civil Aviation Organization (ICAO) and the International Maritime Organization (IMO) which made possible the 1996 Greater Caribbean SAR Workshop, and of the importance of other SAR efforts undertaken cooperatively by these Organizations to promote and harmonize aeronautical and maritime SAR, it is *recommended* that regional civil aviation and maritime SAR authorities seek similar ways to work cooperatively to raise the level of SAR services.
2. Recognizing that, while it may not be readily apparent, many of the resources needed for establishing SAR services already exist, it is *recommended* that States individually and collectively seek to identify those resources, and make suitable arrangements to use them for SAR. Concessions to non-government agencies (e.g., duty free equipment and fuel) should be considered to promote the ability and willingness of such agencies to support the SAR system.
3. It is *recommended* that SAR authorities consider use of mass education and public awareness programs such as television documentaries and radio talk shows to promote use of appropriate safety procedures and equipment.
4. Recognizing the broad international support enjoyed by the Automated Mutual-assistance Vessel Rescue (AMVER) system, and its great potential for assisting both aeronautical and maritime persons in distress within the region, it is *recommended* that:
 - States require appropriate ships to participate in the AMVER system;
 - The United States, as the sponsoring State of AMVER, seek through IMO to have participation in ship reporting systems for SAR made mandatory for ships subject to the Safety of Life at Sea (SOLAS) Convention; and that
 - States within the region ensure that their rescue coordination center (RCC) staffs are trained in how to access and use information from AMVER for SAR when appropriate.
5. Noting that several States within the region have yet to become Party to the International Convention on Maritime Search and Rescue (SAR) 1979, even though many are parties to other Conventions (ICAO Annex 12) containing

similar provisions, and noting the particular importance of providing effective SAR services in a region closely associated with tourism, it is *recommended* that all States:

- become Parties to the 1979 IMO SAR Convention as soon as practicable; and
 - establish national implementing legislation.
6. Recalling the Provisional Maritime Search and Rescue Plan for the Greater Caribbean developed at a regional conference held by IMO in Caracas, Venezuela in 1984, noting that little progress had been made in the intervening years on formalizing and implementing that Plan, and noting similar provisions of the ICAO Regional Air Navigation Plan applicable to the region, it is *recommended* that States on a sub-regional basis:
- seek to review these Plans again at an early opportunity; and
 - act to refine them to more closely harmonize the two plans as appropriate and to define SAR regions optimally for operational purposes.
7. Seeing that both interagency and international cooperation is essential to using all available resources to support and carry out SAR operations, and considering the establishment of SAR agreements and similar plans and arrangements to provide a sound basis for such cooperation, it is *recommended* that regional States and SAR authorities seek opportunities to develop such agreements and arrangements, and further that SAR Committees or similar bodies be put in place to provide means and processes for ongoing improvements in such cooperation.
8. Where appropriate to promote efficiency, interconnectivity, and effective SAR services on a national or regional basis, it is *recommended* that standard SAR procedures and equipment, such as discussed in the SAR Manuals of ICAO and IMO, be implemented as soon as practicable.
9. As SAR training is highly important for personnel at all levels of the SAR system, it is *recommended* that States, among other matters:
- seek and use, as appropriate, technical assistance available via ICAO and IMO to obtain and develop SAR training within the region;
 - share in efforts to develop and implement training capabilities within the States and to promote standardization of such training among the States; and

- as a priority, seek assistance via ICAO and IMO in the form of mobile training teams (MTTs) to address immediate training needs.
10. Further, it is *recommended* that States give SAR assistance a high priority when requesting technical assistance through ICAO or IMO or from donor governments.
11. Recognizing the special difficulty of responding to major disasters and emergencies involving mass casualties, it is *recommended* that States ensure that appropriate SAR plans are developed among neighboring States and exercised regularly for these scenarios.
12. It is also *recommended* that States have plans of operation with appropriate information and checklists for all SAR scenarios which may potentially occur within the region, use standard ICAO/IMO message formats for reporting between RCCs, and share lessons learned from actual SAR cases or exercises.
13. Due to the proven superior performance and lower number of false alerts associated with 406 MHz Emergency Position-Indicating Radio Beacons (EPIRBs) and Emergency Locator Transmitters (ELTs) compared to those which use the frequency 121.5 MHz for alerting, it is *recommended* that States “strongly encourage” vessels under 300 gross tons and aircraft to carry the 406 MHz satellite EPIRBs/ELTs.
14. It is *recommended* that States ensure that as far as practicable the following actions are carried out:
- inter-RCC/RSC visits and exercises;
 - allocation of SAR budgets;
 - use of ICAO and IMO SAR manuals for guidance on standard SAR organization, terminology, procedures, and equipment, as applicable;
 - development of effective plans for future aviation and maritime traffic communications;
 - undertaking ongoing public relations as part of the efforts of each RCC/RSC;
 - development and enforcement of aviation and vessel safety rules;
 - planning coordination between RCCs and disaster preparedness offices; and

- holding SAR program manager level meetings regularly to foster coordination, ensure compliance with ICAO/IMO requirements and recommendations, and with existing plans.

15. It is *recommended* that ICAO and IMO consider:

- placing more emphasis on SAR in their respective magazines and other publications;
- recognizing States achieving substantial improvement in their SAR services each year;
- providing assistance to States in evaluating and improving their SAR organizations and services;
- ways of making communications registration data more readily available to RCCs/RSCs, possibly through development of centralized international databases; and
- as a technical cooperation initiative, conducting a study of regional SAR communications needs and options looking to development of a regional communications master plan.